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Anticorrosive effects and antimicrobial properties of alkyldimethyl(hydroxyalkyl)ammonium bromides

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Abstract

Quaternary ammonium compounds containing the hydroxyalkyl moiety in the head group have been synthesized. These compounds exhibit a micelle-forming ability, high anticorrosive activity, and antimicrobial action. The compounds of the formula R(CH3)2N+(CH2CH 2CH2OH)Br- with R = C14H 29-C18H37 are characterized by a protective effect higher than 90-99% at 10 mg/l with respect to hydrogen sulfide corrosion, inhibiting properties against carbon dioxide corrosion (84-98% at 10-25 mg/l), and bactericidal action on sulfate-reducing bacteria (10-50 mg/l). © 2011 Pleiades Publishing, Ltd.

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